

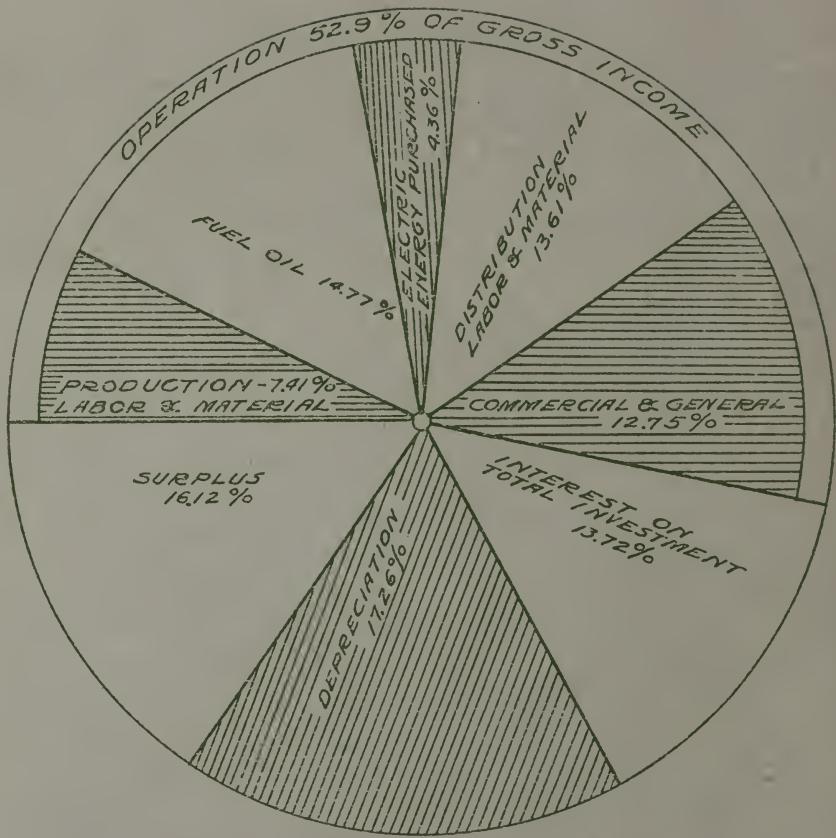
HISTORY

OF

Pasadena's Municipal Light
and Power Plant

By C. WELLINGTON KOINER

General Manager
and Mechanical-Electrical Engineer



DISTRIBUTION OF THE DOLLAR OF INCOME
FOR THE ENTIRE PERIOD
OF TWELVE YEARS



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TYPE OF ORNAMENTAL STREET LIGHTING

History of Pasadena's Municipal Light and Power Plant

By C. WELLINGTON KOINER,
GENERAL MANAGER

In view of the large number of inquiries made from time to time concerning the historical data of Pasadena's Municipal Light and Power plant, this history is being prepared. The facts in connection with the institution, growth and development are being set forth here with a view of supplying the information sought, not only from those who have recently become citizens of Pasadena, but those living in other cities, and their officials who are constantly making inquiries for information.

THE REASON

The necessity for Pasadena establishing its electric utility was first, for the lack of good service for street lighting and general service; and second, the high rates charged for electrical energy at the time the people decided to install their electric utility.

BOND ISSUES

On May 3, 1906 the citizens voted \$125,000.00, the first installment of bonds. This carried and had just thirty-two more than the necessary two-thirds majority. The second bond issue for \$50,000.00 for enlarging the plant and completing the street lighting system was voted on February 20, 1908. The third and last bond issue for \$150,000.00 was voted February 11, 1909. At this time the street lighting system had been completed and commercial service had been rendered to quite a number of people since October, 1908.

In addition to bonds issued there was a direct tax levy in 1906-07 of eighteen cents on every hundred dollars of assessed property valuation, with a result that \$52,332.35 was raised in lieu of bonds.

The rate was set at eight cents instead of the Company's rate of twelve and one-half cents, less 10%, and naturally this wide difference made people eager to extend the service over the entire city. Therefore, they voted seven to one for the third and last issue of bonds to extend their plant over the entire city at that time, there being only 337 votes against the proposition. These bond issues were not as easy as the reader might imagine.

CITY'S RIGHTS CONTESTED

The City's rights were contested in the courts by the City's competitor, and every obstacle put in the way to block the City in starting its enterprise. The rights of the City in the first bond issue were carried to the higher courts, and there decided in favor of the City. At that time the City was ably represented by Hon. J. Perry Wood, who was then City Attorney.

RATES PAID BEFORE CITY BUILT ITS UTILITY

At the time the people began to talk about building an electric utility the rates for electrical energy were fifteen cents per kwh., but a cut was made from this rate to twelve and one-half cents. This was being charged at the time the City entered the field and established the above rate of eight cents per kwh. for domestic service and eighty cent minimum instead of one dollar, with a top rate of four cents for power ranging down to as low as one and two-tenths cents. This, it will be observed, was a little more than half what had been charged before the City entered the field, and at the same time the service in those days was not what the service is today or since the City established its electric utility.

RATES OFFERED AFTER CITY STARTED ITS UTILITY

It may be interesting to even those who are familiar with the history of this utility to relate, especially for the benefit of our newcomers, how the City's competitor offered to furnish all of the electrical energy that a family could use in a month for \$1.25 per month flat rate. The spur of competition was too much for the private company, who had long served the community indifferently and at a high price, so they decided to eliminate the City by making it unprofitable, and if possible, having the City follow into a cut-rate war to the point where the plant would have to be sustained by taxation. However, into this trap the City did not fall. It continued what was a fair and profitable rate, one that would sustain the plant and enable the City to give a high-class service. In order to prevent the private company from killing or eating its rival alive, an ordinance was passed requiring that the company must sell all their electrical energy by meter measurement. This prevented the flat rate which had been set up as a bait to attract the owners of the City's electric utility.

The Company immediately filed a new schedule of rates, but they were lower than those charged by the City. The eight cent rate was continued by the City until such time as the earnings justified a further reduction, which was made to seven cents. The Company dropped to five cents, a difference of two cents per kwh. However, the citizens of Pasadena had been paying fifteen cents per kwh. prior to the installation of the Municipal Light and Power Plant, and this was not forgotten by a large number, who continued to patronize their own plant, even though it cost more than if they had purchased their electricity from their own competitor. This support enabled the plant to show what could be done, and as the business grew in volume and operating costs were reduced, the rate was further reduced to five cents per kwh. for light, scaling down to three cents, and fifty cents minimum, and a maximum of four cents per kwh. for power, scaling down to as low as one and two-tenths cents. The Company, the City's competitor, immediately reduced its rates to a maximum of four cents per kwh., stating that they would go below any rate made by the City.

This difference in rates continued until September, 1913. However, at this time the number of consumers on the City's lines was 5,000, showing the extent of the loyalty of the people of Pasadena in supporting their own plant at a rate that was twenty-five per cent higher than its competitor's rates.

During this period the city had the legal right to fix the rates for electrical energy, they could have regulated the rates of any private corporation to the same as those charged by the City, and the writer favored this action, as he had always believed that a large corporation furnishing electrical energy to several communities from a common hydro-electric system should not play one community against another by selling current below cost in one to throttle a competitor located there, and recoup its losses by charging a higher rate in all, or some, of the other districts.

ACCOUNTING SYSTEM

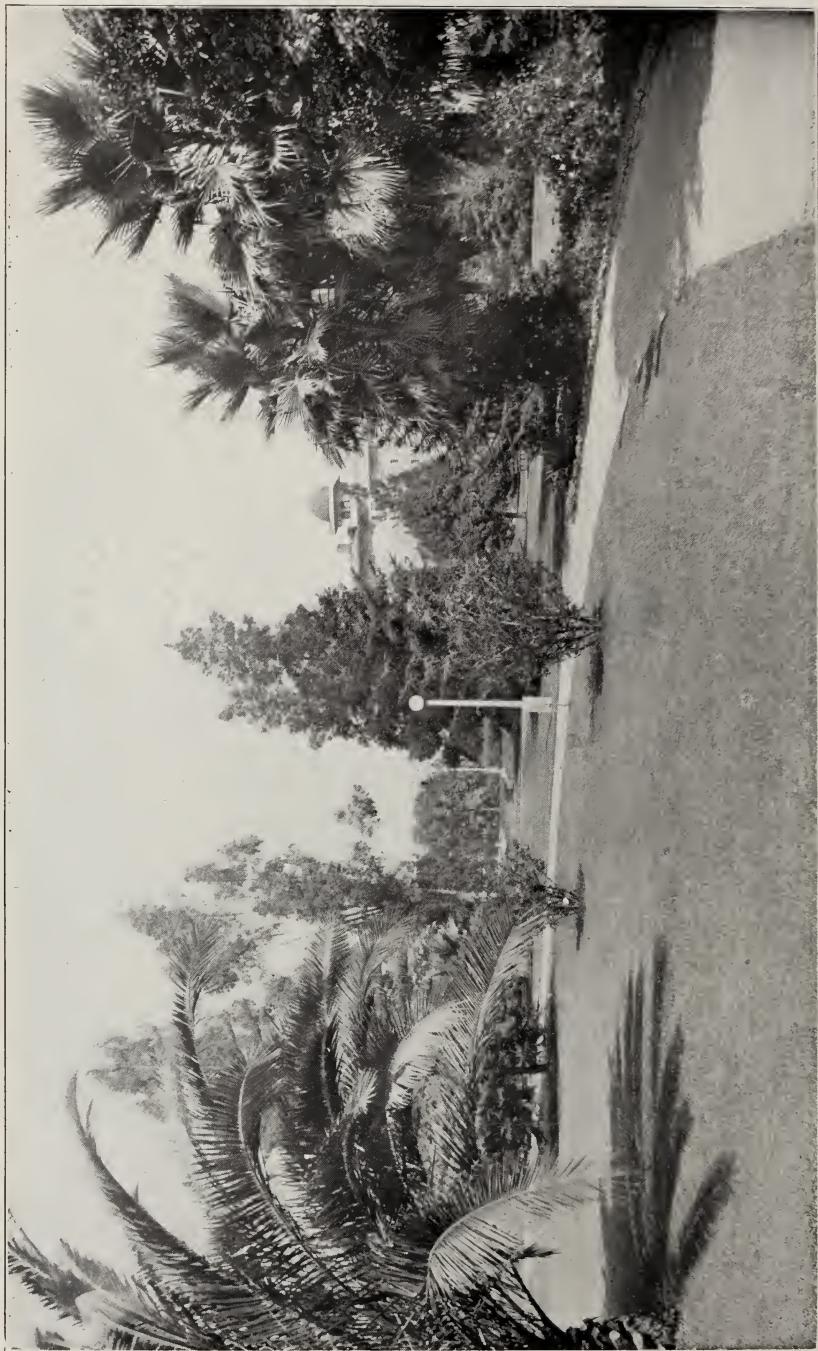
It might be stated at this time that contrary to the predictions of the City's opponent, the Lighting Department's accounting system was such that it was known at all times just what results were being obtained. The National Electric Light Association's accounting system in principle has always been followed by the Light Department, and therefore, the costs of producing and distributing electrical energy are followed closely, thereby enabling the management to keep the business in hand at all times by knowing exactly what results were being obtained.

MAKING THEM SHOW THE FACTS

In March, 1913, the City of Pasadena finally passed an ordinance to take effect some months later, regulating the power rates to equal those charged and fixed by the Utilities Board of the City of Los Angeles, with the provision that either the Municipal Light Department or the private corporation in competition with the City could file a schedule of rates lower than those fixed by the City, providing however, that with the schedule was filed an inventory of their property and a statement of income and expenses, showing that their business was earning at least four per cent. on the legitimate investment in the property.

To comply with the ordinance the City immediately filed its schedule of property—I might add here that the City has always complied with ordinances of this character—showing that we were earning at least four per cent. on our investment. The City's competitor, however, did not file a schedule until January, 1914, at which time they asked to lower their power rates to those employed by the City of Pasadena. In their schedule of property the Company figured an investment against Pasadena as of December 31, 1913, of \$940,461.44 tangible property, including hydro-electric and production property, to which they added \$235,115.36 to cover going value and other intangibles. In submitting this statement of property, income and expenses, they showed a deficit of \$9,286.26, not including interest on tangible investment, which if added would increase their deficit to approximately \$46,904.72. The City Commission did not acquiesce in this reduction at once, and notified the Company's representative to explain to them how they were going to turn the deficit of previous years into profit the coming year, so as to show a return of at least four per cent. on their investment. Inasmuch as the burden of further loss was all on the Company, they were permitted to lower the rates to those charged by the City for power.

TYPE OF PARK LIGHTING



PREVENTING DISCRIMINATION

Relative to the lighting rates of the power company, the Unjust Competition Act, Senate Bill 53, Chapter 276, was passed by the State Legislature. This bill was prepared by the Hon. Senator Wm. J. Carr, formerly our City Attorney, and provided for the prevention of unfair practice on the part of utility or other corporations which furnished commodities in one community and discriminated against other communities. It was this Act which resulted in the Company's asking to equalize their rate the same as those charged by the City of Pasadena in September, 1913. As is evident, the corporation was compelled to choose between doing this and lowering their rates in other communities served to those rates it had been freely giving in the City of Pasadena. Since the equalization of rates the City has increased its customers to 11,127, as of August 31, 1919.

CITY'S OFFER TO PURCHASE ITS COMPETITOR'S SYSTEM

At the time the first bonds were issued to build the City plant, no direct offer was made to the Company by the City to purchase its system. However, in 1909, when the bond issue for extending the municipal commercial light and power service carried by a vote of seven to one, a proposition was made to the private corporation for the purchase of its distributing system, and also for the purchase of electrical energy, providing it could be obtained cheaper than the City could generate it with its steam plant. The private corporation made a counter proposition to purchase the City's plant. The facts are, the City was in the market to purchase, but not to sell. The City's answer, as a result of these negotiations, was a redoubled effort to enlarge its plant and increase its business with the proceeds of the bond issue of \$150,000.00.

CIVIC INDIFFERENCE

It is not quite clear to people, other than those living in Pasadena, why everybody in Pasadena did not use light and power from its own system. The answer is that a large number of officials of the Southern California Edison Company, and during the period of keenest competition, approximately seventy-six of its stockholders, had their homes in Pasadena, and as a matter of course, the Company brought to bear every possible influence against the successful operation of the municipal plant. The question can be further answered by stating that a corporation, receiving liberal rates for its service in other communities, over a diversified system, often uses a part of the money thus obtained, through the medium of newspapers, periodicals, paid solicitors and other means, to prevent a municipal enterprise of the character of Pasadena's from succeeding.

A MILD STATEMENT OF THE COMPANY'S ATTACKS

It was an easy matter to write up very plausible articles, attacking the City's enterprise and the wisdom of it, and have an interested security holder of the corporation, who lived in Pasadena, sign it. This was a favorite means of attack, but was always promptly met with facts, and these attacks of the Company always worked out in the end as a boomerang against the corporation itself.

The corporation always employed a large corps of solicitors, ranging as many as ten or twelve at times, who canvassed the City's users with a view of securing them as customers of the corporation. Strangers moving into the city, not understanding the history of the fight, would often be influenced to cut out the City's service and take the corporation's. The City necessarily employed a corps of solicitors to counteract the corporation's efforts in this connection. The result has been that some years we would connect two thousand meters (in round figures), and disconnect one thousand to twelve hundred. However, the gain has always been in favor of the City, but it made gathering the business more expensive than it otherwise would have been.

I might add that it has been a long, hard fight, extending over a period of twelve years, the strenuousness of which has only been relieved during the period of the war, through an offer to purchase our competitor's system, which is still pending.

FIDELITY OF THE PATRONS

It required faithfulness and loyalty on the part of the citizens during the history of building and putting into operation their electric utility, to pay to themselves, month after month, fully twenty-five per cent. more than the private corporation charged for electrical energy. The people of small means have loyally and faithfully patronized their own plant, extending their limited custom as their contribution to make municipal ownership a success. The residence consumer was, and has been, the backbone of the City's electric utility, since the City began furnishing electrical energy to the residence consumer. In this connection, the City enjoys a mixed patronage of large and small users. This not only applies to the residences, but to all classes of business, until at the present time the City has about sixty-seven per cent. of the business.

During one of the most turbulent periods in the history of the plant, one of the ardent supporters of the Department portrayed the turbulent situation as follows:

A SONG OF MUNICIPAL LIGHT

Dedicated to CITY ATTORNEY J. PERRY WOOD, and
C. W. KOINER, General Manager

By Mrs. Grinnell
Pasadena, June 28

Sing Ho! for municipal light,
Municipal Light!
It's afraid o' the dark I be—
The dark-o-the-moon on the sea
Where the city's bark rides
On the changing tides
With the sharks on all sides o' me.

Sing Ho! for municipal light,
Municipal Light!
It's afraid o' the dark I be—
When, in Love's sweet society,
We sit holding hands
On the shifting sands,
My little sweetheart and me.

TYPE OF PORCH LIGHTING



Sing Ho! for municipal light,
Municipal Light!
It's afraid o' the dark I be—
When I sit in the sanctua'ree,
And the preacher he hints
At the awful footprints
O' the De'il that is hard after me.

Sing Ho! for municipal light,
Municipal Light!
It's afraid o' the dark I be—
When my lawful Affini-tee
Hits me square in the rib
At a cry from the crib,
And I rise to take up the ba-bee.

Sing Ho! for municipal light,
Municipal Light!
It's afraid o' the dark I be—
Afraid that my sweetheart, and me,
And the preacher that hints
At the awful footprints
Will get mixed in the dreadful melee.

Turn on the municipal light,
Municipal Light!
Let it shine for Prosperi-tee
On the city I dwell in, and me,
My Sweetheart, the priest, and the crib—
And whatever may cry in the crib—
And the sharks on all sides o' me.

THE FAVORITE MEANS OF ATTACK

In the height of the campaign for business on the part of the City, both of the newspapers heartily supported the City. However, the News changed hands, and at the same time changed its policy. Month after month it made its attacks, trying to pick to pieces all the reports issued on the operation of the City's electric utility, all of which finally acted as a boomerang, compelling the paper to change its management on account of the fact that the people were suspicious as to the intentions of the owners of the paper and its purposes in the community. The paper even changed hands, but that failed to arrest its downward flight, until finally, it was bought out by friendly interests, and again merged into the ranks of the City's constant supporters.

The Star, which is now the Star-News, has always been a faithful supporter of the City's municipal utility and deserves great credit for its constant support and help extended in the years when help was greatly needed.

ALL PROMISES KEPT

Time, however, has given added proof of the correctness of all reports that have been issued in connection with the operation of the Department.

Every promise that has ever been made on the part of the management of the Department has been kept. "The proof of the pudding is in the eating," and "not in the promises of the cook," and during the past twelve years we have had sufficient time to digest the pudding, without the ill effects predicted by the City's opponents.

An enterprise of this kind must be judged over a period of years, not one year or two years. No business is judged on the results of one year's operation. We have now had sufficiently long period of operation to judge the real worth of the enterprise. In fact, we have passed through a period of stress, owing to world-wide conditions that many private utilities have not been able to stand up under.



TYPE OF ORNAMENTAL STREET LIGHTING

The balance sheet as of June 30, 1919 is submitted here for study:

Balance Sheet as of June 30, 1919

ASSETS

PROPERTY ACCOUNT	\$673,744.58
Real Estate, Station Equipment, Overhead &	
Underground Lines, Transformers, Meters,	
etc.	\$993,079.85
LESS Depreciation Reserve to June 30, 1919....	319,335.27

Total Depreciation Reserve to June 30, 1919..	323,978.17
Less replacement 1915-1919	4,642.90

Net Depreciation Reserve.....	319,335.27
INVENTORIES	53,614.00
ACCOUNTS RECEIVABLE	23,418.57
Commercial Light and Power.....	\$ 12,629.17
City Streets and Buildings.....	8,571.00
Sundry Accounts	2,218.40

CASH	29,383.32
Municipal Lighting Fund.....	29,083.32
Office Cash	300.00

INVESTMENTS—Liberty Loan Bonds.....	125,100.00

	\$905,260.47

Balance Sheet—Continued

LIABILITIES

FUNDED INDEBTEDNESS		\$234,275.00
Total Bonds Issued.....	\$327,000.00	
1902 4%	2,000.00	
1906 4%	125,000.00	
1908 4½%	50,000.00	
1909 4%	150,000.00	
LESS Bonds Redeemed.....	92,725.00	
Paid out of Taxes.....	68,250.00	
Paid out of Operating Surplus	24,475.00	
PREMIUM ON BONDS		3,836.43
CONTRIBUTION FROM TAXES		228,329.56
Taxes of Year 1906.....	52,332.35	
Street Lighting Appropriation.....	2,299.95	
Land for Power Plant Building.....	6,000.00	
Land for Pearl St. Warehouse.....	1,900.00	
Bonds Redeemed	68,250.00	
Bond Interest Paid	97,547.26	
ACCOUNTS PAYABLE AND DEPOSITS.....		\$ 18,155.79
RESERVE FOR INTEREST		126,954.79
Charged on Total Average Investment.....	\$257,423.05	
Paid Bond Int. from Taxes....	\$97,547.26	
Paid Bond Int. from Surplus...	32,921.00	130,468.26
SURPLUS		293,708.90
Balance on Account July 1, 1918.....	\$227,714.06	
Gain for Year ended June 30, 1919.....	65,994.84	
Actual Operating Gain.....	\$85,405.87	
LESS Increase in Int. Reserve....	19,411.03	
		\$905,260.47
Total Assets with Property depreciated...	\$905,260.47	

In analyzing this balance sheet it will be found that the total cost of the plant was \$993,079.85, while there has been deducted a charge of \$319,335.27 to cover depreciation. It will be conceded even by the uninitiated that this would appear to be a liberal allowance for this purpose. In fact, when the maintenance of the plant is taken into consideration, the property has not depreciated physically to the extent that it has been debited.

Adding to the remaining value of the plant account, the inventories, accounts receivable, cash, Liberty Bonds purchased and owned by the Department, the total assets, after the property has been depreciated, amount to \$905,260.47. The total assets, without depreciation, would be \$1,224,595.74.

In analyzing the liabilities it will be noted that the total amount of bonds issued was \$327,000.00; premium on bonds, \$3,836.43; contribution from taxes, \$228,329.56 (which was in lieu of bonds), making the total liabilities for the purchase of the plant from bonds and taxation, \$559,165.99. The difference between the original cost of the plant and this sum represents the amount that has been put back into the plant from its earnings, and represents reserves, surplus, etc.

It will be observed that the liquid assets amount to \$231,515.89, as of June 30, 1919. The outstanding bonds amount to \$234,275.00.

SAVING EFFECTED TO THE PEOPLE

In addition to the results shown by the preceding balance sheet, the saving resulting to the users of electrical energy in Pasadena since the installation of their electric utility, is now represented by the sum of \$1,700,856.58. This large sum of money has been kept in the pockets of our citizens and is the result of the difference in rates charged before the city entered the lighting business and the rates charged since in our neighboring cities, except Los Angeles, by the City's competitor. This annual saving is arrived at each year by calculating in the same way on the basis of the number of kilowatt hours sold. This saving for the past year amounted to \$223,785.48, and is the same as if the city had \$5,595,000.00 invested for which it received 4 per cent. per annum.

At the present time the City's competitor receives a maximum rate, including surcharge, of eight cents in neighboring cities (except Los Angeles) Alhambra, Long Beach, Santa Monica, etc., while if the same rate was charged for electric energy used in the City of Pasadena, it would amount to an increased cost for electric energy of \$223,785.48. This is on the basis of 11,500,000 kilowatt hours of electric energy sold in the City of Pasadena. The maximum rate of the City is only five cents per kwh.

These results should cause all citizens in Pasadena to appreciate the value of this electric utility to them, in order that their vigilance may be such as to maintain this success. *For after all, eternal vigilance is the price that must be paid for the continued successful operation of this utility.*

In addition to this saving, we must consider the economies of retaining at home the pay-roll of this Department, which amounted to \$64,858.25 for labor alone for the year, and which is practically all disbursed in the City of Pasadena.

The building and operation of this utility was a combined engineering and business proposition. Not only was it a business and engineering enterprise, but a very important public matter. As an engineering and business proposition, under the circumstances and conditions, it was necessary to stretch the dollar to the elastic limit, and at the same time provide reliable equipment and get along without display. To provide and supply all necessary finances, it was necessary to plan considerable in advance and economize to the limit, and at the same time not stint in the service. The best equipment has been used throughout. However, the power plant buildings have been temporary, the machinery having been housed in this way until such time as the financial condition of the Department warranted the erection of a permanent power plant building. This is one of the things planned for the future, and in due course will be erected, covering the present power plant equipment.

BENEFITS OF NEW IDEAS

The plant management has always brought within reach of customers and drawn to their attention, everything new in the art, the citizens receiving the benefit of all new ideas in the electrical world. On March 15, 1911, the Department sent out a circular showing the effectiveness of Tungsten lamps at that time. It was pointed out that these lights would cut the bills in two, or better. This was contrary to the practice of private utilities of this class at that time. This type of lamp was also used in 1908 for street illumination, being one of the first large street series installations installed in the United States.

This applies to the management of the business in detail. The office equipment of this Department has always consisted of the most modern equipment; in fact, the Municipal Light Department was one of the first to adopt the billing and posting machines, which were installed over three and a half years ago. This applies to all other office machinery, which was adopted and used just as soon as it was found to be reliable and effective, resulting in a saving and expediting our work.

RATES

Maximum rate charged by private company before the plant was started.....	15c per kwh
Maximum rate charged by private company at the time the plant was started.....	12½c per kwh. less 10%
Maximum rate charged by Municipal Light Department	8c per kwh.

All rates have since been reduced to those set by the Municipal Light and Power Department, and at this time the rates charged in Pasadena for light and power are as follows:

LIGHT

First 100 kwh.....	.05 per kwh.
Next 400 kwh.....	.04½ per kwh.
Next 500 kwh.....	.04 per kwh.
Next 1000 kwh.....	.03½ per kwh.
Over 2000 kwh.....	.03 per kwh.
Minimum charge.....	.50 per month

POWER

First	100 kwh.....	.04	per kwh.
Next	400 kwh.....	.024	per kwh.
Next	1000 kwh.....	.02	per kwh.
Next	500 kwh.....	.019	per kwh.
Next	1000 kwh.....	.018	per kwh.
Over	3000 kwh.....	.012	per kwh.
	Minimum charge.....	\$1.00	per month

As long as production costs remain the same with the City as they are today, these rates may prevail. We have been fortunate indeed during the war period in not having to increase our rates. There would be no hesitancy on the part of the management to increase rates if it was necessary, to the amount that would sustain all proper charges in the operation of this utility. We trust, however, that our operating costs can be so maintained in the future that it will not be necessary to increase the rates above what they are now, and it will not be necessary, unless through some unforeseen reason the cost of production and generation increases beyond what it is today, to such an extent that we would be compelled to increase the rates.

NO INCREASE OF RATES DURING THE WAR

In this connection, it might be pointed out that even during the war period had it been necessary to increase our rates to six cents, it would at the same time have been two cents lower than that charged by our competitor in neighboring cities. As it is our maximum rate remains at five cents, while our competitor's maximum rate was raised to eight cents per kwh. in neighboring cities, except Los Angeles. Our power rate still remains one of the lowest in the land, starting at four cents and scaling down to one and two-tenths cents per kwh.

SUMMARY OF TWELVE YEARS' OPERATION

Operating					
Receipts	Expenses	Interest	Depreciation	Surplus	Deficit
1906-07	\$ 997.09		\$ 4,466.62		\$ 5,463.71
1907-08	23,425.64	17,688.71	\$ 8,771.92	9,490.64	12,525.63
1908-09	45,875.76	21,431.73	11,454.47	11,728.07	\$ 1,261.49
1909-10	74,935.32	36,068.56	14,909.24	15,817.05	8,140.47
1910-11	110,011.10	56,570.95	18,387.79	17,902.69	17,149.67
1911-12	123,485.11	63,700.30	21,627.37	19,528.66	18,628.78
1912-13	138,889.41	70,073.45	20,728.54	24,529.33	23,558.09
1913-14	176,431.30	96,641.66	23,020.47	27,408.25	29,360.92
1914-15	193,505.11	100,945.84	24,968.50	30,345.04	37,246.23
1915-16	214,735.27	107,027.09	26,616.40	41,740.67	39,351.11
1916-17	248,933.45	310,453.66	28,331.96	38,087.79	52,060.04
1917-18	256,427.70	154,335.70	29,374.92	40,520.48	32,196.60
1918-19	274,530.85	136,891.66	29,231.47	42,412.88	65,994.84

It will be observed that the plant started with part of the street lighting system only, the first year; we did not do any commercial business until the latter part of 1908, so in charging interest and depreciation on the value of the plant for the full time a deficit was shown for the first two years. However, this was soon wiped out by the application of the surplus, which followed after this time, and which has accumulated to \$293,708.90, at the present time.

PATRONAGE NECESSARY TO SUCCEED

It must not be lost sight of that it is the patronage that enables the City to make and hold the low rates. But for the patronage of its owners the rates could not be maintained as low as they are, because it is the volume of business that enables the Department to generate and distribute electrical energy at the present rates. Therefore, in order that the present low rates may continue, this patronage must be loyally continued, insuring at all times the best service at the lowest rates.

In this connection, many ask the question, "What is the matter with the man who does not patronize his own electric utility?" with the further searching question, "What kind of a citizen is he who does not appreciate the benefits sufficiently to co-operate with seventy per cent. of the people who willed to establish and support this City enterprise?"

CIVIC DUTY

In spite of an honest difference of opinion that may have existed at the inauguration of the plant, after more than sixty-six per cent. of the people decided to launch the enterprise, all others should loyally enter into this spirit. To hang back and fight a proposition afterwards, is to fight one's city. This is doing the opposite of what we are teaching today—namely, loyalty to our city government, state government, national government. There is not very much patriotism shown in the disposition to knock an enterprise that the City has once entered upon by so large a majority. It is our opinion that when over sixty-six per cent. of the people decide on a policy, all of the people should carry it through, and endeavor to make it one hundred per cent. efficient. We cannot gain strength by lying abed and looking at the ceiling. We must exercise, and in order for a city to exercise its functions and learn to do good municipal housekeeping we should undertake to run these necessary utilities for the benefit of all concerned.

Many of our people take the position that any enterprise that the city establishes by not less than two-thirds vote, or sixty-six per cent. of its people (in this instance it was considerably more), should be loyally supported by all of the people, especially in view of the fact that the city has always given a square deal to its competitor. In this connection, there is at this time a standing offer on the part of the City for the purchase of its competitor's system in Pasadena, which will enable the company to take its money elsewhere and use it, leaving the entire field to the City.

SHOULD A CORPORATION SUPPLY ITSELF WITH A SERVICE THAT IT CAN PRODUCE CHEAPER AND MORE EFFECTIVELY THAN IT CAN PURCHASE FROM AN OUTSIDE SOURCE?

If it is found that a city has a charter that will permit it to build and efficiently operate its necessary utilities, sewers, jails, fire department, police department, electric utility, water utility, etc. (remembering that we are not speaking of anything but utilities, privileges asked by private parties for the use of the streets to make profit), cheaper and more effectively than it can purchase this service on the outside, what is the objection? A private corporation must necessarily make sufficient profit to make it attractive.

In building and operating these necessary utilities, the city does not presume to invade any field of operation that properly belongs to private interests; it only seeks to perform for itself a service that it can perform better than it can be purchased for from those who enjoy special grants and privileges to use our streets and public places for profit. The benefits resulting to the people of Pasadena from owning and operating their sewer system are apparent. Is there anyone who would turn this over to private parties to operate for profit? The answer is most emphatically "No". Then why should we turn over any other utility that is just as important as the sewer system, for instance the water utility and our electric supply, to private parties to own and operate for profit?

To deny that we have the ability as a municipality to own and operate utilities of this character is to acknowledge that we, as a people, are a failure under democratic form of government. Who of us would want to take this position? If we will unselfishly give a part of our time to the solution of our various problems we can and will evolve municipal governments that will function in the interests of all the people.

When a city builds and operates its various utilities it makes for a better class of citizenship. People take greater interest in civic affairs. It brings all the people in contact with those who perform the City's service and thereby makes them a part of the organization as a whole. This is consistent with the argument that we should, if possible, own our own homes, thereby increasing our interest in civic affairs, producing a higher class of citizenship.

If the affairs of the city are not properly managed it is immediately brought to the attention of its owners, the people, and they have the means of making all necessary corrections. Those who are opposed to the principle of a city owning and operating these various utilities as mentioned here, argue that the present form of city government, that is throughout the United States, is not suited to the idea of owning and operating these utilities, so far as it relates to the electric, gas and transportation utilities. This may be true in part. However, it can be corrected, should be corrected and must be corrected in order to make the operation of these utilities successful. Cities with liberal charters are successfully building and operating these necessary utilities.

MAKE THE NECESSARY INDUCEMENT TO SECURE CAPABLE MANAGEMENT

Management may be had on the part of the city by attracting to its service men who know the business technically and otherwise of operating these various utilities and who, when under the proper form of government are given authority, and a reasonable salary, to operate and manage the utilities of the character under discussion without molestation or interference on the part of the professional politician, and those in the employ of the private corporation, and further, those who are not familiar with the utilities' needs and methods of operation. Such men will plan and purchase the best equipment to be had; plants will be built under the most advanced engineering ideas and operated according to the most modern methods, with the result that all citizens may use the service at the low

rates made possible by reason of no interest to be charged on inflated values. In this connection, it might be stated that the men and machinery they bring into the service of the city will perform just as efficiently when employed and owned by a municipality as when employed and owned by a private corporation.

BY WAY OF COMPARISON

In comparing the municipally owned utilities in some of the larger cities of the country with those operated by private interests in cities of the same class during the period of the war, it has been found that they show up just as well, and in some they show up better, than privately managed plants, in spite of any handicap they may have had, due to the form of government under which they were operated. It is notorious that one of the obstacles to overcome in the operation of these utilities on the part of the city, is the tendency of interference with the management on the part of the uninitiated officials, who are unfamiliar with the complex business of electric and transportation utilities, etc.

HANDICAPS

In a large number of cases, municipal charters have been devised and designed to prevent the successful conduct of the business on the part of our municipalities. In our own Pasadena we find a restriction to purchase only \$500 worth of materials or supplies without advertising for bids. This has and does cause considerable loss to the City of Pasadena in the course of a year. It is true that bids for small amounts of material will not be rendered at the lowest price, when the bid is advertised. The same firm will quote you in private a lower price than they will make if rendering a bid on small amounts and quantities under the existing value of \$500. We must learn to look at results. This should be increased where the city is operating utilities such as water, light and power, to at least \$3,000, and in fact, it would be better if it were \$5,000. Frequently there is a slump in the market of some material of which the city is in need, and before the invitation for bids can be submitted and put through the necessary machinery the price has shot up and the city is the loser by not being able to get in on the market at the right time.

The people must not lose sight of the fundamental, that they have necessarily to trust somebody to do these things for them, and when operating on as large a business scale as our own city is today there should be sufficient leeway to properly conduct the business of the city, and then judge by results, always remembering that the people have it within their power to make any change at any time they wish.

REGULATION VS. MUNICIPAL OWNERSHIP

The principle of regulating privately owned utilities has been advanced in place of municipal ownership. The public must not lose sight of the fact that it requires as much ability to successfully regulate a privately owned utility as it does for a municipality to own and operate it. Instead of dissipating this energy on an attempt at regulation, which is never satisfactory to the public from the public's standpoint, it should be used on the actual construction and operation of these utilities. *The attempt at regulation often results in the public being regulated for the benefit of the investor.* It happens in this way: Where the facts concerning the original cost of

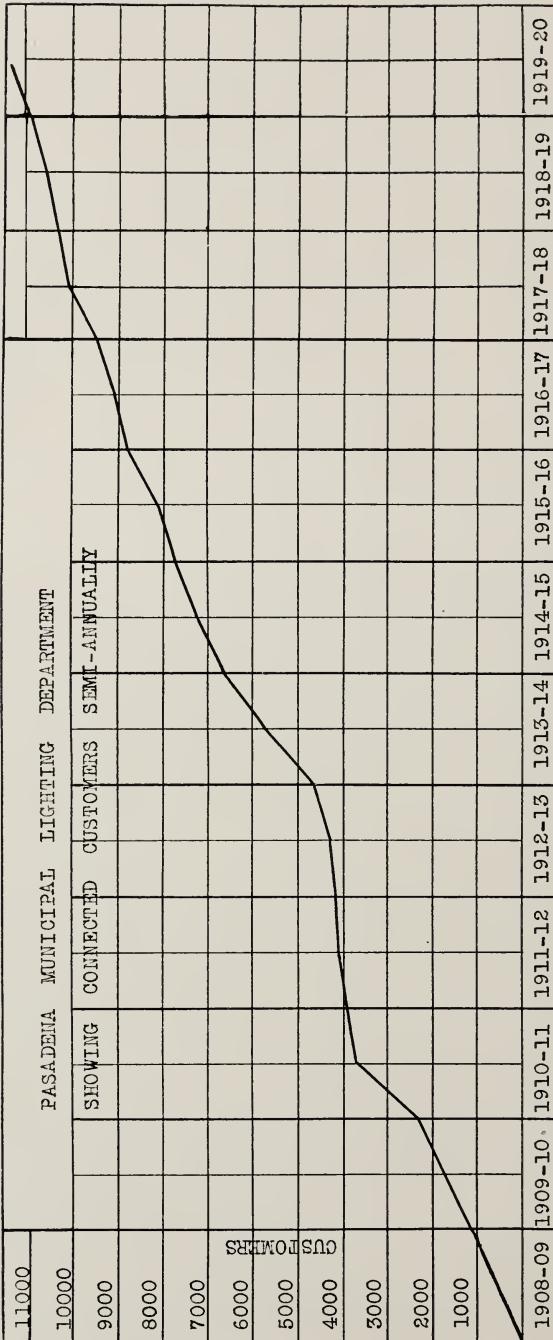
construction of a property are not to be had or arrived at, the public is called upon to pay interest on obligations that were never incurred for the public use. We have glaring examples of this in various cases of attempted regulation. The private company is entitled to a just return on the capital invested in property and equipment necessary to the public use, but no more where the proper return is guaranteed under regulation. The management may have been poor and inefficient, unnecessary investment may have been made, poorly designed equipment and construction, an over-investment may have been made for the service of the community, due to lack of judgment on the part of the management, in which case the public is asked to pay interest and return for an unnecessary investment which, under this condition, would be regulating the public for the benefit of the investor, the would-be investor, the promotor and speculator. This is not a case of what might happen, it is a case of what actually does happen. It must be conceded that companies seeking to serve the public must take their chances. Corporations seeking to serve the public in this way must know the public requirements and not hope to recover their losses, due to poor judgment and ultra-speculation by means of regulation.

The fundamental cannot be ignored, that an investment made upon a competitive basis in the utility field cannot hope to be protected from any operating losses that may occur, whether due to competition or the improvements in the art. In other words, the corporation's burden cannot be transferred to the public through a regulating body. This would be the most glaring kind of regulation of the public for any wild-eyed promotor who might conceive of various schemes and projects that would be unworkable or that might be attempted for the public use.

The dividend on municipally owned utilities is always approximately one-third that demanded by a private corporation. Therefore, the rates for the service never can be as low under private ownership as under municipal ownership and operation, in spite of the handicaps in cases where unnecessary interference may be imposed on operation performed under antiquated charters.

CURVE OF GROWTH

The following curve shows the growth in number of meters connected:



It may prove of interest to include with this the earnings by months and years since the plant first started to serve electrical energy for light and power, which was in October, 1908.

CHARGES FOR COMMERCIAL LIGHT AND POWER BY MONTHS

	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
July	\$ 1,749.22	\$ 3,317.52	\$ 4,535.51	\$ 5,216.49	\$ 8,193.29	
August	1,866.81	3,462.30	4,501.72	5,231.96	8,430.17	
September	2,080.90	3,581.90	5,080.38	5,685.79	9,555.60	
October	\$ 218.48	2,515.25	5,110.07	6,104.67	6,832.02	10,231.96
November	812.95	2,766.82	6,105.17	7,384.30	7,805.32	11,546.71
December	1,558.57	4,091.48	7,376.40	8,084.37	8,634.56	11,641.08
January	2,148.30	4,775.89	8,328.90	9,536.96	9,993.86	13,566.01
February	1,934.04	4,771.60	7,775.96	8,396.17	9,329.66	12,307.31
March	1,999.08	4,852.26	7,788.91	8,107.70	8,630.21	10,796.24
April	1,874.48	4,520.59	6,784.79	7,753.20	8,367.11	10,506.03
May	1,686.24	3,457.37	5,741.51	6,145.77	7,286.10	9,889.11
June	1,808.55	3,046.09	5,146.96	5,758.81	8,354.35	9,038.42
Total.....	\$14,040.69	\$40,494.28	\$ 70,520.39	\$ 81,389.56	\$ 91,366.83	\$125,701.93
*City Depts.....	1,271.51	1,129.80	1,068.34	1,381.10	1,810.65	2,155.62
Street Lighting.	30,563.56	33,311.24	38,422.37	40,714.45	45,711.93	48,573.75
Total :.....	\$45,875.76	\$74,935.32	\$110,011.10	\$123,485.11	\$138,889.41	\$176,431.30
	1914-15	1915-16	1916-17	1917-18	1918-19	
July	\$ 8,559.72	\$ 9,642.39	\$ 10,621.59	\$ 12,908.90	\$ 14,919.02	
August	8,797.04	10,099.61	10,940.66	12,761.83	13,694.62	
September	9,143.89	11,114.63	12,001.61	14,223.28	14,403.67	
October	10,917.59	12,831.51	13,963.97	16,132.23	15,359.91	
November	12,159.62	13,581.21	16,763.69	17,497.51	17,340.12	
December	13,910.99	14,994.02	18,768.01	18,928.69	19,600.78	
January	15,182.12	17,777.69	22,044.65	19,780.42	21,078.00	
February	13,994.49	15,334.47	19,480.07	18,988.12	20,698.29	
March	12,848.62	14,542.54	18,639.31	17,495.89	19,475.17	
April	12,559.19	13,822.20	16,771.44	16,907.94	18,413.76	
May	10,938.99	12,075.41	14,055.81	13,926.81	17,218.44	
June	10,161.83	11,797.93	13,876.29	13,462.47	19,221.30	
Total.....	\$139,174.09	\$157,613.61	\$187,927.10	\$193,014.09	\$211,423.08	
City Departments	2,463.26	2,638.93	2,989.06	3,216.10	3,853.79	
Street Lighting	51,729.44	54,039.97	57,698.01	59,554.14	56,276.76	
Total	\$193,366.79	\$214,292.51	\$248,614.17	\$255,784.33	\$271,553.63	

*Not including Water Department.

STREET LIGHTING

Our street illumination has increased since the Department began furnishing electrical energy for street lighting 1005.8 per cent, and the cost of street lighting has only increased 225 per cent.

A reduction in street lighting rates has been made as given below:

80 C. P. Street Series Mazdas.....	\$12.00	per year
100 C. P. Street Series Mazdas.....	15.00	per year
400 C. P. Street Series Mazdas.....	45.00	per year
600 C. P. Street Series Mazdas.....	50.40	per year
All ornamental lighting.....	.031/4	per kwh.

The area of the city did not increase until 1914, when it was expanded by annexing certain territory 1.8% ; also in 1916, when it expanded 0.35% ; and again in 1917, when it expanded 0.57% .

The following chart shows graphically the increase in street illumination.

PASADENA		MUNICIPAL		LIGHTING		DEPARTMENT	
	SHOWING	TOTAL	CANDLE	POWER	OF	STREET	LIGHTS
600000							
550000							
500000							
450000							
400000							
350000							
300000							
250000							
200000							
150000							
100000							
50000	PRIOR TO MUNICIPAL PLANT	1906-07					
1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
							1914-15
							1915-16
							1916-17
							1917-18
							1918-19

COMPARISON WITH NEIGHBORING CITIES

It may be of interest at this time to touch upon the negotiations that were entered upon for the purchase of the distributing system of the City's competitor in Pasadena and the purchase of electrical energy, in August, 1917.

As far back as 1909 the City of Pasadena had an understanding with the City of Los Angeles Power Bureau that it would purchase electrical energy from the City of Los Angeles when their hydro-electric system was completed and put into commission. At that time the question was taken up with a view of changing the frequency of additional equipment consisting of prime movers, or generators, in the power plant of Pasadena to conform to the frequency at which the City of Los Angeles would generate electrical energy. The City having started out with sixty cycle equipment at this time changed to fifty cycles, the special frequency adopted in Southern California. Therefore it was always understood and expected that the City of Pasadena would ultimately buy hydro-electric energy from the City of Los Angeles at a price cheaper than that for which the City of Pasadena could generate it.

However, as in this case the unexpected often happens. On April 30, 1917, the city officials of Los Angeles entered into a contract with the Southern California Edison Company, leasing the Company's distributing system for a period of two years, with an agreement to purchase same at the end of two years, subject to the vote of the people. The contract provided that the city was to buy power from the Southern California Edison Company for a period of ten years. The City also agreed to sell surplus power to the Southern California Edison Company as provided for under Section 5, pages 9-10, as follows:

"The City agrees that, if at any time during the period of fifteen (15) years from the date of this agreement, it shall generate electric energy in excess of the quantity required by it for distribution within the corporate limits of the City of Los Angeles, as they may exist from time to time, it will notify the Companies that it has such surplus energy for sale, and the Companies shall have the right to purchase during the period for which such surplus energy shall be available, all or any fractional part of such surplus electric energy at a fair and reasonable price, to be agreed upon by the parties, and, in case they cannot agree, then on application of either party, the same shall be fixed by the Railroad Commission of the State of California, or such other body as shall have the fixing of electric rates in charge, provided, the Companies shall, within thirty (30) days from receipt of such notice from the City, notify the City in writing of their election to exercise their right to purchase such energy. The City shall be at liberty to sell to any other person or corporation, such part of such surplus energy as the Companies shall not elect to purchase as aforesaid."

This was indeed disappointing; to many it looked as though further co-operation on the part of the City of Los Angeles could not be expected, inasmuch as that City's representatives failed to live up to their agreement,

regardless of all the City of Pasadena had done in the way of co-operation with Los Angeles. Under the terms of this contract any surplus power would always be taken by the Southern California Edison Company, and therefore there would be nothing left for the City of Pasadena.

At this time the war was on and the City of Pasadena was paying \$1.55 per barrel for fuel oil. The necessity for the conservation of fuel oil was being strongly urged by officials at Washington for the purpose of winning the war. Yet we did not receive any hydro-electric power from the City of Los Angeles to give relief as had been promised and which would have aided greatly in conservation of fuel oil.

To make a long story short, Pasadena was ignored on the part of those officials who were responsible for the failure in carrying out the proposed arrangement made previously. Negotiations were started with a view of purchasing the Southern California Edison Company's system in the City of Pasadena, at the same time purchasing hydro-electric energy at a price of \$.0085 scaling down to what would have been approximately .008 per kwh., depending upon quantity consumption. When it began to look as though there might be a possibility of the City's competitor agreeing to such terms that might be acceptable to Pasadena, some of the Los Angeles officials who had always before been in favor of carrying out the contract with Pasadena, urged that renewal of application be made for hydro-electric power. This was done on October 25th. However there was no reply made to this until the 21st of November, nearly a month. At that time, however, things had worked around to the point where it looked as though we could once more expect and depend upon co-operation on the part of the City of Los Angeles, the result being that an offer was made to supply the City of Pasadena with electric energy at .0065 per kwh. Our previous arrangement had been for current at a rate somewhat lower.

The City of Los Angeles was informed of the negotiations that were in process with the City's competitor. We could not honorably withdraw, as certain terms had been agreed upon, which if approved by the Southern California Edison Company, meant that the City would lease their distributing system in Pasadena for a period of two years, or longer, if the war continued. At the end of that time, or after the war, we were then to submit the proposition to the people of Pasadena for approval. Therefore, with this understanding, a contract for power was entered into with the City of Los Angeles, subject to cancellation on thirty days' notice by either party.

This arrangement was in force until the final contract was made on February 6, 1919, for a period of fifteen years, the Railroad Commission, in the meantime having disapproved of the contract that the City had agreed to make at the time the City of Los Angeles failed to live up to their contract and previous promises with reference to supplying Pasadena with electrical energy. The terms of the proposed contract with the Southern California Edison Company were such that the rates could not be increased. This point was insisted upon by Pasadena, and inasmuch as the Railroad Commission refused to not guarantee any increase in rates, this excused the City from further negotiations with the Southern California Edison Company for the purchase of electric energy. In the meantime the two

cities had gotten together, as had always been the plan that they should, and the contract was made with the City of Los Angeles, February 6, 1919, for a period of fifteen years, for surplus electric energy at a rate not to exceed .007, which provides for the maintenance of the City's steam plant, not only for our own use, but for supplying electric energy to the extent of our peak load demand for the City of Los Angeles at such times as may be required, due to emergency.

This brief reference to the former understanding that the City has always had with the City of Los Angeles, is made here with a view of clearing up any misunderstanding on the part of some of our citizens. Pasadena had anticipated for a long time the purchase of electrical energy from the City of Los Angeles and certain Los Angeles officials had always hoped that the two cities would work harmoniously together, until somebody began to throw monkey wrenches into the machinery, metaphorically speaking. And in this connection, there is on file at the City Hall all records covering the entire history of all negotiations, which are accessible at any and all times to those who may want to read the communications on the entire subject.

FINAL OFFER OF THE CITY TO PURCHASE ITS COMPETITOR'S SYSTEM IN PASADENA

The people of the City of Pasadena, those who have supported this utility when it cost something to support it, feel that the City should occupy the entire field, and that there should be no competition, and in view of the success of their enterprise in competition with a strong competitor they realize that if the City can make a success in competition it can make a greater success by occupying the entire field. Therefore, the City Commission has made a formal offer to purchase the distributing system and substation of the Southern California Edison Company, the City's competitor in the City of Pasadena, and it is hoped that the offer, which is based upon the Company's valuation, and takes into consideration the amount of business that the Company would turn over to the City, will be accepted, thus giving the City the entire field, thereby resulting in greater benefits to its owners.

Some of the benefits resulting would be greater net earnings at the same rates now charged after the business of the City's competitor was consolidated with its own, which in time would enable the City to make the sale of electric energy at a lower rate than would be possible with the business divided as it is now. The consolidation of the two businesses, all of it being operated by the City, would give greater diversity and a lessening of expenses in the distribution of all electric energy used in Pasadena, as compared with the operation of two systems. Furthermore, the unsightly pole lines would be reduced fifty per cent. The tendency after the City occupies the entire field will be to go underground when and wherever possible, making the cost of the conduit system much less for one system than for two, as has been the experience in the past where the conduit systems have been installed, providing space for two power systems. The pole lines can be erected in some sections of the City, where one Company occupies the field, on the rear of the property without detriment or unsightliness, thus cleaning up the streets of superfluous poles.

ENLARGING IN ADVANCE OF GROWTH

The City is engaged at the present time in enlarging the switchboard equipment in its power plant, with a view of receiving continuously electric energy from the City of Los Angeles, and operating the steam plant in emergencies. This entails moving and replacing of switch gear and switch-board equipment, providing all necessary equipment for the future, as well as the present. In view of the Department's obligation to return a stipulated sum of money to the City as retirement of its obligations, which are the same or equivalent to redeeming bonds, the power plant building which was planned will not be built this year, possibly not for several years yet. In a way, it is an advantage that the City has not erected a permanent power plant building, because anything built at the beginning would have been inadequate at this time.

The Department is constantly purchasing distribution equipment, reinforcing the lines, adding additional copper, larger transformers, and providing for the future growth of the City.

The Department is not only supplying electric energy to the City itself, but it is supplying neighboring unincorporated territory to a limited extent. However, the Department has a perpetual franchise for supplying electric energy in the City of South Pasadena and is supplying part of the latter city at the present time, but not the entire city.

AIDING A NEIGHBORING CITY

It may be of interest to know that Pasadena supplied the City of Los Angeles with electric energy for redistribution before they started their hydro-electric power plant. In this way we lent our co-operation to the City of Los Angeles, at the inauguration of their hydro-electric system.

SERVING ITS CUSTOMERS

As has been stated, the Department seeks to aid its customers in the solution of their electric problems wherever possible. It was for this reason that the Mazda lamp was first adopted and recommended to all customers of this Department because of the saving effected, and the increased illumination for less money, as compared with the old style lamps. At this time the Department is selling Mazda lamps at cost to its customers.

ITS SPONSORS

No mention will be made at this time of the individual names of those who have so loyally supported the light and power system, because the list is so numerous that it would be impossible without the possibility of overlooking some accidentally which might be taken as an intentional slight. However, I wish to refer to those who, living in obscurity, as it were, have always supported this enterprise, even though it cost them money that they could ill afford to lose. There are people living in the City of Pasadena who have sacrificed the rent of their property for the sake of maintaining the service with the municipal light system; widows, whose sole support was from such properties, have made this sacrifice to the knowledge of the writer. This is standing for a patriotic principle, when it costs real money to do so, and is one of the tests of real and true patriotism. Most people are patriotically inclined, but when there is a clashing of interests there is a type of citizen who will not allow his patriotism to interfere with his pocketbook.

With the help of the loyal supporters and patrons, and consistent advocates of the City's electric utility, from a modest beginning in 1907, when electric energy for street lighting only was supplied, the City's electric utility has been built up from nothing, as it were, to a magnificent property supplying electric energy at this time through 11,312 meters, notwithstanding the severest kind of competition from its competitor.

AMPLE CAPACITY

The system has a plant capacity double the present demand, and considerable margin of capacity in the entire distributing system for taking care of additional business.

It has always been the policy of the Department to make preparation for taking care of increased business that could be had, due to new building and additional industries, or other demands that might be made upon the Department for service. This was done by extending the lines, after the property was well started, into all parts of the City, until there is no un-supplied demand for electric energy from this utility; that is to say, there are no applicants for electric service within the city limits that the Department has not been able to supply.

BY WAY OF COMPARISON

We know things by comparison. The operating results of the City's electric utility have had to stand the double acid test by way of comparison. In this particular it has been raked fore and aft, plowed deep, cross-plowed and double harrowed, X-rayed from above and below, and audited by every known method this side of China, with the result that the more it is compared the better the showing. The results and benefits obtained show up considerably better than all of the promises made for them.

All of the predictions made by its opponents have failed, and after twelve years strenuous uphill pull, it has arrived with great credit to its patrons and owners, having achieved by their loyal support more than its advocates had hoped for in overcoming all obstacles and operating under surrounding conditions. It is a very great satisfaction for Pasadena to have proved in so short a period that the predictions and prophesies adversely made, were without foundation. The success of this city's enterprise demonstrates what can be accomplished when a municipal family acts with concert of purpose. Co-operation is necessary in the building of a city, achieving in its development an increasingly ideal home life for all of its citizens. In such an organized effort there is no place for the eternal knocker, the pessimist, the man who never can see any good or possible results in anything that a city undertakes to accomplish.

In Morris Llewellyn Cooke's book, "Our Cities Awake," is found the following comment by Lincoln on good citizenship:

"I like to see a man proud of the place in which he lives. I like to see a man live in it so that his place will be proud of him. Be honest, but hate no one; overturn a man's wrong-doing, but do not overturn him unless it must be done in overturning the wrong. Stand with anybody that stands right, and part with him when he goes wrong."

SOME OF THE THINGS TO BE CONSIDERED ON THE PART OF A CITY IN ATTEMPTING TO INAUGURATE THE BUILDING AND OPERATION OF AN ELECTRIC OR OTHER UTILITY.

FIRST: Secure the services of an engineer who has an established reputation in serving the public's interests, one who is free from alliances with private utility companies, in order that he may serve the city whole heartedly and without fear or favor of any clientele. In other words, one who will give the city all the facts and safely guide the city in a matter of this kind.

After the plant has been built and put into operation it should be put under the care of a competent manager and engineer, and if he gets results let him alone and protect him from interfering, well-meaning, but over-officious and meddlesome politicians. If he does not get the results, after a reasonable period, comparing his results with other similar utilities, fire him and put someone else in his place, with the same authority, which must not be divided for the purpose of obtaining the results desired.

In any good business organization there is always a head. This must be an actual head, without interference. He must have initiative and possess the knowledge and judgment necessary to successfully manage the business and be given full authority to proceed, and a salary in keeping with the responsibility. The results will be success. A poor plan, well worked, is better than the very best plan interfered with. Most failures in municipal ownership are traceable to somebody's shirking, or interference. Where responsibility is expected, authority must be given. There must be no clashing of departments. Cities' charters must be so changed as to allow the utility to be properly operated without interference from any other department. The management must be given absolute control over the service from the place of generation to the place of consumption, including every phase, that of accounting as well. The benefits and results will be in proportion to the service rendered, and in order to render the proper service the management must be given authority to supervise the service in every detail.

A newly elected official must not feel that when he comes into office the public desires him to first upset the departments coming under his direction. It is true he is the elected representative of the people, but he is not serving the people to the fullest advantage if he interferes with the well organized departments without justification. If a department is not giving results he is justified in directing that such changes as are necessary to give results be made. However, he must first be sure that he is acting in the right direction. In fact, it would be well for him to call in consulting advice in order that no mistake be made. Employees of municipal utilities should be treated the same as under civil service rules, if the city is not working under civil service regulations. That is, their positions should be secure as long as they discharge their duties efficiently.

If a city will be guided by the above principle they may expect the following advantages in the operation of a municipally owned utility, as compared with a private utility:

A high class service at the lowest price.

There is no watered stock or inflation upon which interest must be paid.

Interest ceases as the bonds are paid off, and when all of the bonds are paid off, interest ceases entirely.

A municipality can borrow money at a very much lower rate of interest than a private corporation.

The overhead expenses are lower.

The City is not supposed to play favorites, and it will be found that less discrimination is shown on the part of municipally owned utilities than with private corporations.

Municipal utilities are run for service at what it costs to produce the service, not for profit or excess dividends.

In operating a municipal utility for service, the customer pays exactly what it costs, and delights in doing so.

A successful municipally owned and operated utility is the proof of democracy.

Before a city builds a utility in competition with an existing privately owned utility, every effort should be made to first acquire the private utility property. And if it is not possible, under fair and equitable means to acquire the existing utility, then the city is justified in paralleling the existing system.

And in this connection the city must have the advice of an engineer who will give the facts, and as stated above, is not so allied with private interests that he is unable to give an unbiased report to and for a municipality on a matter of this kind.

GENERAL INFORMATION

PLANT EQUIPMENT consists of 2213 H. P. in boilers B. & W. and Stirling type; 2000 H. P. in cross compound condensing engines; 6200 H. P. in Parsons type steam turbines. Total generating capacity approximately 8000 H. P.

POLE LINE consists of the following poles:

70 foot.....	7
65 foot.....	9
60 foot.....	174
55 foot.....	168
50 foot.....	534
45 foot.....	1605
40 foot.....	1902
35 foot.....	1786
30 foot.....	255
25 foot.....	126
Total.....	6566

Number of service connections, 9551.

Number of transformers 825, equivalent to 9396 K.W. capacity.

Number of meters 12,720, equivalent to 13,653 K.W.H. capacity, of which 11,327 are in service.

Underground system 5.91 miles, complete system for both commercial and street lighting service.

Eight miles of 33,000 volt transmission lines, consisting of two separate lines for transmitting power to and from Los Angeles.

Street lighting rates for ornamental lighting are $3\frac{1}{4}$ c per K.W.H., the system consisting of the following ornamental lights:

152 5-light ornamental posts equipped with 4 25-watt and 1 100-watt lamps.

42 5-light ornamental posts equipped with 4 40-watt and 1 60-watt lamps.

9 13-light ornamental posts equipped with 1 40-watt and 12 25-watt lamps.

35 ornamental posts equipped with 1 600-c.p. lamp.

231 ornamental posts equipped with 1 400-c.p. lamp.

457 ornamental posts equipped with 1 80-c.p. lamp.

871 ornamental posts equipped with 1 60-watt lamp.

48 ornamental posts equipped with 1 100-watt lamp.

Saving resulting to the people by reason of the difference in rates \$1,700,856.58 to June 30, 1919.

It is the policy of the management of the Department to make the compensation for those who serve the city in this Department what it should be for high-class and efficient service.



TYPE OF ORNAMENTAL STREET LIGHTING

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